**UNION SQUARE ACADEMY FOR HEALTH SCIENCES**

Bernardo Ascona, Principal

Jovany Cuevas and Shannon DeRosa, Assistant Principals

Ms. Donna Kam, Biology 7-12

|  |
| --- |
| **Class:** 9th Grade Living Environment |
| **Teachers:** Ms. Kam (Periods 2, 3, 8); Ms. Figueroa (Periods 2, 3); Mr. Gomez (Period 8) |
| **Driving Question (AIM):**   * How does my carbon footprint affect the stability of the global ecosystem? |
| **Anchor:**  Write down how long you think it takes for each of those categories to break down in the environment? (Image below) |
| **Agenda (Cornell Notes, Activities/Artifacts, Projects, Summary):**   * Anchor * Shareout on Anchor * Explanation of how to use Carbon Footprint Calculator * Reflection on Carbon Footprint Reduction * Lesson Summary - Shareout |
| **NYS Standard(s):**   * LECC 7.2a Human activities that degrade ecosystems result in a loss of diversity of the living and nonliving environment. For example, the influence of humans on other organisms occurs through land use and pollution. Land use decreases the space and resources available to other species, and pollution changes the chemical composition of air, soil, and **water**. |
| **Next Generation Science Standard(s):**   * HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.\* [Clarification Statement: Examples of human activities could include urbanization, building dams, and dissemination of invasive species. Examples of solutions could include simulations, product development, technological innovations, and/or legislation.] |
| **Common Core Standard(s):**  *Reading Standards for Literacy in Science and Technical Subjects 6–12*   * Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text (CCSS.ELA-LITERACY.RH.9-10.3). * Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics (CCSS.ELA-LITERACY.RH.9-10.4). * Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy) (CCSS.ELA-LITERACY.RH.9-10.5). * Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words (CCSS.ELA-LITERACY.RH.9-10.7). |
| **Learning Intention (IWBAT):**   * I will be calculate my carbon footprint, reflect on ways to reduce it, and explain its significance to the global ecosystem. |
| **Context (What are students doing? Why are they doing it? Essential or pivotal questions, Mini-Lesson):**   * Anchor (5 min) – Write down how long you think it takes for each of those categories to break down in the environment?   (Show diagram below)    **Answer:**     * Instructions for Carbon Footprint Calculation   <https://www3.epa.gov/carbon-footprint-calculator/>   * Self - Reflection – What are some changes you can make to your daily life to reduce your carbon footprint. Why is it important? (Think biodiversity) * Lesson Summary – Share out with whole class on your carbon footprint findings or reflection on activity.     **Hinge Point/Summary Questions:**   * + Why is it important to conserve our resources?   + Do you feel that the Flint Water Crisis, Cape Town’s Water Shortage and now your calculation of your carbon footprint are reasons for you to start conserving resources? Why?   **Multiple Entry Points:**   * Students working in small groups. * Students join in entire class share-out.   **Checks for Understanding (Throughout the Lesson):**   * Which resources are consuming the most in your daily life? * What are some things you can do to reduce your carbon footprint? |
| **Differentiations (Differentiating content, process, or product; Using data to create flexible groups; Modifying based on IEPs):**   * Reading instructions aloud * Writing verbal notes on the board * Giving ELLs and SpEds additional attention, walking to their groups during activities. * Vocabulary translations in Spanish for ENLs in the class. * Individualized assistance will be provided to all students. * Students will work in heterogeneous groups for group work.          |  |  | | --- | --- | | **Living Environment 2nd Period** | | | Nicole Blas (M) | Nicole will receive visual aids, as well as spoken information to support her with reading comprehension in living environment. Nicole, will also receive 1:1 instruction when necessary as well as repetition of previously taught concepts, when needed. | | Dana Bowen (S) | Dana will be seated right in the front of the room to minimize any distractions. She will be given a pre-writing graphing organizer for writing assignments in living environment.  When necessary she will receive 1:1 instruction and/or small group instruction. | | Kelly Cabrera (M) | Kelly will be seated near the smart board as she has vision difficulties. She will receive small group instruction when needed. Teachers will do check-ins to make sure fully understanding of the material being taught. | | Elhadji Diop (M) | Elhadji will receive 1:1 support when clarification is required. He will also receive pre-writing graphic organizers to support his writing skills. Teachers will do check-ins to ensure his understanding of the content being taught. | | Brian Gallo Bermeo (S) | Brian will receive visual aids to support him with understanding of major points of the lesson. Repetition and check-ins will increase during the mini-lesson to ensure Brian’s understanding of the main ideas.  Multi-step assignments will be broken down into segments, as well as a step by step list will be provided | | Johnattan Garcia (S) | Johnattan will receive 1:1 support and clarification on in class assignments. Johnattan will be paired with a partner that will support him with reading comprehension, as well as refocusing. Teachers will ask direct questions to check for understanding of main ideas. Rubrics of assignments will be provided in advance, so that Johnattan understands what is expected of him. Positive reinforcement will be provided on a regular basis. | | Roy Harris Jr. (S) | Roy Benefits from utilizing graphic organizers to aid him with multi-step assignments. Roy will be redirected when being off task. | | Jhoan Hurtado (S) | Jhoan will receive color-coded material to aid him with reading comprehension. Teachers will do constant check-ins to make sure Jhoan is following along with the lesson and/or activities. Reading assignments will be provided in chunks to ensure reading comprehension of main ideas/main material. | | Sergio Kuilan (S) | Sergio will receive small group instruction when needed. Sergio will receive visual aids when new material is introduced. He will also receive simplified directions and step-by-step checklist on lengthy assignments. | | Daylan Lopez (M) | Daylan will receive pre-writing graphic organizers, and checklists on lengthy assignments. When word problems are involved, Dylan will receive an annotation guide to help extract the important information on a word problem. | | Raya Mack (M) | New information will be presented utilizing a multisensory approach and accompanied by visual models and concrete manipulative materials.  Raya will be provided with repetition and clarification of instructions as well as frequent review of new concepts. Raya will be provided with graphic organizers and tools to assist her in breaking down tasks into smaller components. Important information will be restated, paraphrased and emphasized to ensure Raya's auditory comprehension of material. Re-questioning Raya would ascertain if she understands the instructions and/or material. | | Jasmine Palma (H) | Jasmine will be provided with one-on-one instruction and/or small group instruction when required. Jasmine can become overwhelmed when being in large group setting.  Jasmine will receive a graphic organizer for lengthy assignments to support her with the assignment. | | Jasmin Sosa Tepale (S) | Jasmin will receive extensive modeling of an activity. Constant check for understating throughout the lesson will be provided  (verbal, written, and/or physical signal)  Small group instruction will be provided when required, as well as one-on-one instruction. | | Christine Vargas Cabrera (M) | Christine will receive graphic organizers, vocabulary banks, and sentence starters.  Christine will be provided with post-its and highlighter to underline important information when reading complex texts in Living Environment.  Christine will receive checklists and calendars for long-term projects and assignments. |  |  |  | | --- | --- | | **Living Environment 8th Period** | | | Amber Abud (S) | Amber will receive small group instruction ad constant check-ins from her teachers. Amber will be provided with short and concise directions. Amber will also be provided with checklists to ensure completion of assignments. | | Manuel Alvarez (S) | Manuel will be provided with checklists to ensure he is following the material. Startegies such as turn and talk will be implemented as much as possible, as Manuel benefits from sharing his ideas with peers. Manual will also be provided with small group instruction when required. | | Britney Disalvo (S) | Britney will be provided with graphic organizers to support her writing and high interest reading materials whenever necessary.  Lengthy tasks will be broken down into smaller components to ensure Britney’s understanding of the material being presented. | | Napash Jones (S) | Napash will be provided with extensive modeling of new material, as well as repetition. Napash will also be provided with sentence starters when essay writing and/or short responses are involved. | | Maria Martinez (S) | Maria will receive one-on-one support when required. Positive reinforcement will be provided. Passages and questions will be read aloud to her. | | Ashley Medina (S) | Ashley will receive graphic organizers to visually organize information and to assist with writing tasks. Ashley will also receive on-task prompts to help her minimize any distractors. | | Rosario Reinoso, Lorenny (ENL/S) | Student is English as a New Language learner. Will be seated and working with a student that speaks Spanish and can help with interpretation.  Spanish dictionary will be provided during exams and as needed. | | Camacho, Maria (ENL/M) | Student is English as a New Language learner. Will be seated and working with a student that speaks Spanish and can help with interpretation.  Spanish dictionary will be provided during exams and as needed. | | Hernandez Andrade, Scarlet (ENL/M) | Student is English as a New Language learner. Will be seated and working with a student that speaks Spanish and can help with interpretation.  Spanish dictionary will be provided during exams and as needed. |   **Key:**  **S = Struggling Level**  **M = Medium Level**  **H = High Level**  **ENL = English as a New Language**  ***Differentiation - Students will be receiving lab handout with hints next to the analysis questions based on Lexile scores from Read180 with Ms. Leung.***    **Co-teaching Model:**   * **Team Teaching Model** |

|  |
| --- |
| **Materials:**   * Computers |
| **Assessment (How will you know what the students have learned? Exit slips, learning logs):**   * Randomly choosing students to answer discussion questions throughout the lesson and having students choose their peers so we listen to different types of answers. * Regents Practice Questions for the anchor, activity, and lesson summary * Lesson Summary - Ask the class to explain their activity, review conclusion questions. * Both teachers will be going around the room providing over the shoulder support and making sure students are on task and working with their partners answering questions. * Assessment Checklist will be used to monitor progress throughout the period.   ***Assessment Checkers*** |
| **Extension Activity/HW (What will happen in subsequent lessons?):**  Intradisciplinarily, students can apply these scientific investigation skills to other labs in Living Environment and on the Regents exam.  Interdisciplinarily, students can apply these skills to ELA class as they utilize evidence and infographics to support claims and predictions. |